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TRANSPORTATION

MEMORANDUM

TO: Clark County Board of Commissioners
FROM: Steve Schulte, Transportation Division Manager
DATE: April 20, 2010
SUBJECT: Review of McCann Road Traffic Conditions

This memo includes a preliminary review of the pedestrian and vehicular traffic situation on McCann Road and adjacent streets in fulfillment of the commitment made by the Board to the McCann Road Committee in a letter dated November 2, 2009.

The McCann Road Committee, with the support of numerous local residents, is requesting that the County update the West Felida Circulation Plan to account for growth and changing conditions in this area. Specifically, the group is requesting that this updated plan address five main issues:

1. Traffic volumes on McCann Road.
2. Safety and speeds on the McCann Road curves between NW 36th and 39th Avenues.
3. Intersection level of service at NW 36th Ave/McCann and NW 36th Ave/131st St.
4. Sight distance, pedestrian safety, alignment and drainage at local road intersections with McCann Road.
5. The current classification of McCann Road as a neighborhood circulator.

The Committee's overview document dated August 10, 2009 includes a broad range of options to address each of these issues which could be considered as part of a circulation plan study.

Traffic Volumes

Daily traffic volumes on McCann Road east of NW 39th Avenue are approximately 3,400 trips per day. Build-out of the Ashley Ridge subdivision and other approved developments would add about 1,100 more daily trips to McCann Road. The committee estimated that with full build-out, McCann could serve as many as 785 homes plus the Wastewater Treatment Plant and a future elementary school.

McCann is currently classified as a neighborhood circulator. A neighborhood circulator is intended to serve a maximum of 300 homes or about 3,000 trips per day, however the actual capacity of a neighborhood circulator is similar to that of a collector street.

Neighborhood circulators have a pavement width of 36' consisting of two 8' wide parking lanes and two 10' wide travel lanes.

The next higher level of roadway is a collector street, which is designed to carry 2,000 to 12,000 trips per day. The standard pavement width for a 2-lane collector street with parking on both sides is 38 feet consisting of two 8' wide parking lanes and two 11' wide travel lanes.

McCann Road has characteristics of both a neighborhood circulator and a collector street. The pavement width east of NW 43rd Avenue is 36 to 40 feet wide. West of NW 43rd Avenue, the pavement width of McCann Road varies, but it is typically 32 feet wide at the fully developed sections. The centerline radius of the curves is about 230 feet, which is consistent with a neighborhood circulator (150 feet minimum) rather than a collector (575 feet minimum on flat terrain). Driveway spacing east of NW 39th Avenue is much closer than would be typically allowed along a 25 mph collector, but there is no alternative for access. West of NW 39th Avenue, there are few driveways along McCann Rd.; lots access local streets wherever possible.

The McCann Road Committee recommends that the County consider re-designating a portion of McCann Road as a collector street. This could be accomplished through an Arterial Atlas amendment or in the context of a revised West Felida Circulation Plan.

Reducing current and future traffic volumes on McCann Road would require some combination of diverters, turning movement restrictions and convenient alternative routes. The existing West Felida Circulation Plan relies on traffic circles along McCann and NW 131st Street to slow and deter traffic and identifies future north-south street connections on NW 44th, 46th and 48th Avenues to provide for alternative circulation. Neither strategy appears to be workable or cost-effective without substantial county investment.

It should be noted that diversion of traffic from McCann Rd. to other routes is likely to be unpopular with residents living along those affected streets.

Travel Speed and Safety

McCann Road west of NW 36th Avenue is posted with a 25 mph speed limit and with advisory speed placards of 20 mph prior to both of the curves. The centerline radius of the two curves is approximately 230 feet, which means that the speed they are designed for is 30 mph. Pavement width is 40 feet, narrowing to 36 feet just before the intersection with NW 39th Avenue. On-street parking is rarely utilized, which gives drivers the sense that higher speeds are safe and appropriate.

The prevailing speed (85% of drivers are going at or below this speed) going westbound on McCann increases from 29 mph entering the east curve to 31 mph through the straight section to 34 mph coming out of the west curve. Eastbound prevailing speeds decline from 37 mph entering the west curve to 33 mph through the straight section to 30 mph coming out of the east curve approaching the stop sign at NW 36th Avenue. For comparative purposes, the prevailing speeds for similar high volume neighborhood circulators in Clark County vary from 25 to 36 mph, such that County staff consider speeds on McCann to not be abnormally high.

Clearly, the majority of drivers find the design of the curves on McCann Road convenient to navigate at speeds higher than the posted speed limit. The County re-stripped this segment in 2007 to better identify the travel lanes and to reduce off-tracking, but follow-up studies have shown that there was no reduction in travel speeds.

There were three reported accidents on McCann Road from 2003 to 2008 and one at the intersection of McCann and NW 36th Avenue. Two were collisions with fixed objects. One was a collision with a vehicle leaving a driveway, which might have been prevented by reducing speeds. The calculated accident rate for McCann Rd from NW 36th to 43rd Avenues is 1.92 per million vehicle miles travelled, which is normal for an urban neighborhood street. While the data does not show a significant number of accidents in this area, the public perception is that the risks to pedestrians crossing the street and vehicles leaving driveways are unacceptable.

There are several types of traffic calming devices that could be employed to slow traffic along this segment. "Speed lumps", which have been used extensively in the City of Vancouver, are very effective in reducing travel speeds with minimal delay to emergency vehicles, because they are 5.5 to 7 feet wide, allowing fire engines to straddle the "lump" ("New Traffic Calming Device of Choice", ITE Journal, December 2009). However, traffic calming is not recommended at this time because actual accident rates and speeds do not appear to be abnormally high.

Intersection Level of Service

The intersection of NW 36th Avenue at McCann Road currently operates at level of service C, but is projected to decline to LOS F with build out of Ashley Ridge subdivision. LOS F is defined as high levels of congestion with extended delay times for vehicles. If McCann is designated as a collector street, it would make this intersection one that is tested for compliance with the County's congestion management standards. Intersection improvements could then be required as a condition of development approval or constructed as a county-financed project (subject to the Transportation Improvement Program priority rating process). Alternatively, a combination of private and public funds could be used.

Traffic signal warrants are currently met for the intersection of NW 36th Avenue at McCann Road based on an April 4, 2007 analysis by Robert D. Klug, P.E., Traffic Engineer for Clark County. Signalization would likely require some widening on the north leg to provide for a southbound left turn lane. Retaining walls and right-of-way acquisition may be needed to construct these improvements north of the intersection.

None of the other main West Felida intersections (NW 131st St or 127th St at NW 36th Ave) are likely to meet signal warrants in the foreseeable future unless a substantial amount of traffic is diverted from McCann Road.

NW 43rd Ave/McCann Road

Sight distance to the west for southbound vehicles is restricted by shrubbery at the northwest corner of NW 43rd Ave/McCann Road. Most of this vegetation appears to be in the public right-of-way and thus could be removed once the property line has been established. Sight distance to the east for southbound vehicles is also severely restricted by trees and shrubs along the north side of McCann that are on private property. Acquisition of an easement or right-of-way could be negotiated so that removal of this vegetation can be completed, since this is a major access for the Ashley Heights neighborhood. Otherwise, it might be necessary to slow travel speeds along McCann Road with additional traffic calming devices or to close the southbound lane on NW 43rd Avenue and divert outbound neighborhood traffic to another route.

Similar sight distance restrictions exist for both northbound and southbound travel on NW 39th Avenue at McCann which should also be investigated and remediated. Additionally, sight distance restrictions exist for southbound travel on NW 47th Avenue at McCann.

Drainage improvements and catch basin replacement issues on NW 43rd Avenue are outside the scope of this report and are best addressed by Public Works through a maintenance project, a stormwater capital project or a local improvement district project.

Findings

In summary, traffic volumes on McCann Rd. are slightly higher than normal for a neighborhood circulator street and will increase with future development. However, there is no compelling operational or safety reason to physically divert traffic to the south at this time.

Travel speeds on McCann Rd. are slightly higher than normal for a neighborhood street. Speeds through the curves are perceived to be dangerous by residents, however the accident rate is not unusually high. Over time, the growing traffic volumes will naturally slow traffic on McCann Rd. to be more compatible with a residential neighborhood. This could also result in some diversion of traffic to parallel routes to the south.

Safety is the County's highest priority on its road system. At this time, there are no clear indications that McCann Road is not safe or that accident rates are higher than normal. Transportation staff will continue to monitor traffic safety and volumes and will address any problems that occur.

Sight distance is restricted by vegetation at some of the intersections of local streets with McCann Rd.

And finally, with respect to the classification of McCann Road, reclassifying the road to a collector street would have little impact on operations or safety. With the exception of the NW 36th Avenue/McCann Road intersection, reclassifying McCann would have minimal benefit because the roadway is already fully built-out and it would be cost-prohibitive and highly disruptive to neighboring properties to widen and rebuild.

Recommendations

1. Direct County Road Operations staff to investigate, and if appropriate, initiate vegetation removal at (1) NW 39th Avenue and McCann,, (2) NW 47th Avenue and McCann, and (3) NW 43rd Avenue and McCann to improve sight distance.
2. Direct County Road Operations staff to investigate storm drainage issues at NW 43rd Avenue and McCann and to repair or replace any hazardous catch basins.
3. Continue to monitor speed, congestion levels and accident history on McCann Rd. and at the intersection of McCann Rd/NW 36th Avenue.